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10/759,552	01/16/2004	Ming-Hua Li	OR0403IT	8103

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EXAMINER

MULLER, BRYAN R

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/759,552	Applicant(s) LI ET AL.	
	Examiner Bryan R Muller	Art Unit 3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-11, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 13 is objected to because of the following informalities: It appears that the word, "to" should be inserted between the words, "interconnected" and "the" in line 5 of claim 13 (line 15 of page 9). Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The preamble of claim 1 recites a numeric display device in a torque wrench but the claim does not recite any structure for the numeric display. It is unclear if the applicant is claiming the numeric display (in which case the claim is non-limiting), the combination of the numeric display and torque wrench or a torque wrench with a numeric display along with the other claimed properties.
3. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The last line of claim 13 states that the cylindrical member is stopped by the cap, but the figures and the specification fail to describe how the cap stops the cylindrical member is stopped by the cap. It appears that the only thing that stops the cylindrical member from movement is the sliding pin and elongated groove.

Art Unit: 3723

For the sake of this action claim 13 has been interpreted to disclose that the cylindrical member is stopped by the sliding pin instead of the cap.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-5, 7-11, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Hsu (5,537,877).

6. In reference to claim 1, Hsu discloses a numeric display device (80) mounted in a torque wrench having a preset maximum torque, the torque wrench comprising a hollow, cylindrical handle (20), an enclosed box portion (30) at a forward end of the handle, and a torque measurement assembly (40, 50, 52) at a rear end of the handle, the torque measurement assembly being releasably coupled to a rear end of the enclosed box portion and adapted to transmitting signals to the display device.

7. In reference to claims 3 and 4, Hsu further discloses that the numeric display device receives a signal from the torque measurement assembly to display the preset maximum torque value and would thus, also display the amount of torque being exerted on the wrench when the enclosed box portion trips because the wrench is designed

such that the box trips when the torque on the wrench is equal to the preset maximum torque.

8. In reference to claim 5, Hsu discloses a torque wrench having a preset maximum torque, the torque wrench including a hollow, cylindrical handle (20), an enclosed box portion (30) at a forward end of the handle, a torque measurement assembly (40, 50, 52) at a rear end of the handle and being releasably coupled to a rear end of the enclosed box portion, and a numeric display device (80) for receiving signals output from the torque measurement assembly, the torque measurement assembly comprising a trigger member (40) mounted in the handle, the trigger member having a front end releasably coupled to the rear end of the enclosed box portion, a signal generator (40, 50, 52) including a forward end coupled to a rear end of the trigger member, the signal generator being adapted to generate signals and transmit the signals to the display device, and a setting assembly (60, 52) mounted at the rear end of the handle, the setting assembly having a forward end coupled to the signal generator, the setting assembly being adapted to move in the handle for pushing the signal generator.

9. In reference to claims 7 and 8, Hsu further discloses that the numeric display device receives a signal from the torque measurement assembly to display the preset maximum torque value and would thus, also display the amount of torque being exerted on the wrench when the enclosed box portion trips because the wrench is designed such that the box trips when the torque on the wrench is equal to the preset maximum torque.

Art Unit: 3723

10. In reference to claim 9, Hsu further discloses that the enclosed box portion comprises an extension (32) at a rear end, and the trigger member comprises a roller at a front end being in contact with the extension.

11. In reference to claim 10, Hsu further discloses that the signal generator comprises a forward resilient means (50) having a forward end biased against the trigger member (40), a rear sensor (83), and an intermediate disc (front portion of 52) having a forward side engaged with the resilient means and a rear side engaged with the sensor so that the sensor is adapted to generate signals in response to compressing or expanding the resilient means.

12. In reference to claim 11, Hsu further discloses that the resilient means is a spring.

13. In reference to claim 13, Hsu further discloses that the setting assembly comprises a forward cylindrical member (52) having a forward barrel for receiving a sensor (832) of the signal generator, a rear knob (61) threadedly secured to the cylindrical member (the knob is attached to threaded rod 62 which is attached to the cylindrical member by threaded screws 22, thus the knob is threadedly secured to the cylindrical member), a sliding pin (832) inserted through an elongated groove (21) on the handle, into the cylindrical member for coupling therewith, and a cap (70) interconnected to the cylindrical member and the knob so that turning the knob will advance the cylindrical member to push the signal generator until being stopped by the sliding pin.

Art Unit: 3723

14. In reference to claim 14, Hsu further discloses that the signal generated by the signal generator that is transmitted to the display device is a resistance value (col. 4, lines 56-65) and resistance is represented by the expression $R=V/I$, wherein V represents voltage and I represents current. Therefore, the resistance signal is both a voltage signal and a current signal.

15. Claims 1-8, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Thorn (5,890,406).

16. In reference to claim 1, Thorn discloses a numeric display device (180) mounted in a torque wrench having a preset maximum torque, the torque wrench comprising a hollow, cylindrical handle (112), an enclosed box portion (152) at a forward end of the handle, and a torque measurement assembly (158, 160, 162, 164, 168) at a rear end of the handle, the torque measurement assembly being releasably coupled to a rear end of the enclosed box portion and adapted to transmitting signals to the display device.

17. In reference to claim 2, Thorn discloses that the torque measurement assembly is adapted to receive signals output from the enclosed box portion and transmit the signals to the display device so that the display device is adapted to numerically display an amount of torque being exerted by the wrench responsive to the enclosed box portion being operative to hold and turn an article (col. 6, lines 51-64).

18. In reference to claim 3, Thorn further discloses that the torque measurement assembly is adapted to receive signals output from the enclosed box portion and transmit the signals to the display device so that the display device is adapted to

numerically display an amount of torque being exerted by the wrench when the enclosed box portion trips while operating (col. 6, lines 51-64).

19. In reference to claim 4, Thorn further discloses that the torque measurement assembly is adapted to turn for generating signals representing a preset maximum torque and transmitting the signals to the display device so that the display device is adapted to numerically display the preset maximum torque when tripping (col. 6, lines 51-64).

20. In reference to claim 5, Thorn discloses a torque wrench having a preset maximum torque, the torque wrench including a hollow, cylindrical handle (112), an enclosed box portion (156) at a forward end of the handle, a torque measurement assembly (158, 160, 162, 164, 168) at a rear end of the handle and being releasably coupled to a rear end of the enclosed box portion, and a numeric display device (180) for receiving signals output from the torque measurement assembly, the torque measurement assembly comprising a trigger member (158) mounted in the handle, the trigger member having a front end releasably coupled to the rear end of the enclosed box portion, a signal generator (160, 162, 164) including a forward end coupled to a rear end of the trigger member, the signal generator being adapted to generate signals and transmit the signals to the display device, and a setting assembly (threaded rod not numbered) mounted at the rear end of the handle, the setting assembly having a forward end coupled to the signal generator, the setting assembly being adapted to move in the handle for pushing the signal generator.

21. In reference to claim 6, Thorn discloses that the torque measurement assembly is adapted to receive signals output from the enclosed box portion and transmit the signals to the display device so that the display device is adapted to numerically display an amount of torque being exerted by the wrench responsive to the enclosed box portion being operative to hold and turn an article (col. 6, lines 51-64).

22. In reference to claim 7, Thorn further discloses that the torque measurement assembly is adapted to receive signals output from the enclosed box portion and transmit the signals to the display device so that the display device is adapted to numerically display an amount of torque being exerted by the wrench when the enclosed box portion trips while operating (col. 6, lines 51-64).

23. In reference to claim 8, Thorn further discloses that the torque measurement assembly is adapted to turn for generating signals representing a preset maximum torque and transmitting the signals to the display device so that the display device is adapted to numerically display the preset maximum torque when tripping (col. 6, lines 51-64).

24. In reference to claim 10, Thorn further discloses that the signal generator comprises a forward resilient means (164) having a forward end biased against the trigger member (158, 170), a rear sensor (162, 170), and an intermediate disc (160) having a forward side engaged with the resilient means and a rear side engaged with the sensor so that the sensor is adapted to generate signals in response to compressing or expanding the resilient means.

Art Unit: 3723

25. In reference to claim 11, Thorn further discloses that the resilient means is a spring.

Allowable Subject Matter

26. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jenkins (6,276,243) and Heyraud (4,641,538) both disclose torque wrenches with numeric display devices that have several similar are same properties to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan R Muller whose telephone number is (571) 272-4489. The examiner can normally be reached on Monday thru Thursday and second Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail III can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3723

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BRM BRM
6/3/2005



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